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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,338	12/20/2001	Jesse L. Pedigo	H0002908 (4960)	8540

34284 7590 03/13/2003

ROBERT D. FISH; RUTAN & TUCKER, LLP
P.O. BOX 1950
611 ANTON BLVD., 14TH FLOOR
COSTA MESA, CA 92628-1950

EXAMINER

STONER, KILEY SHAWN

ART UNIT PAPER NUMBER

1725

DATE MAILED: 03/13/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/026,338

Applicant(s)

PEDIGO, JESSE L.

Examiner

Kiley Stoner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-8 is/are rejected.
- 7) ☒ Claim(s) 4 and 9-11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5-6. 6) ☐ Other:

DETAILED ACTION

Claim Objections

In claim 10 is dependent on claim 10. Please correct.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, and 5-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Yoshikawa et al. (6,193,144 B1). Yoshikawa et al. teaches a scavenging blade (item #4); a printed wiring board receiving portion (item #8); and a movement mechanism adapted to move the scavenging blade and printed wiring board receiving portion relative to each other (Figure 1; column 3, lines 57-63); a printed wiring board positioned on the printed wiring board receiving portion, the printed wiring board having both first and second substantially planar surfaces that are substantially parallel to each other and at least one filled hole extending from the first surface to the second surface (Figures 1-2); a filling mechanism wherein the scavenging blade is not part the filling mechanism. The roller of Yoshikawa et al. has been consider to be the filling

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mechanism, while the squeegee is the perfecting device for leveling and removing excess solder. Yoshikawa et al. also teaches the scavenging blade moves independently from the filling mechanism; the scavenging blade is coupled to the filling mechanism (column 2, lines 33-60; column 3, lines 57-63; column 5, line 52-column 6, line 7; and column 6, lines 43-51); the filling mechanism is a squeegee or pressure head (entire reference). The roller of Yoshikawa et al. has been considered to be a pressure head since it uses pressure to force the solder into the vias.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 5 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Oikawa et al. (JP-363295057A). Oikawa et al. teaches a scavenging blade; a printed wiring board receiving portion; and a movement mechanism adapted to move the scavenging blade and printed wiring board receiving portion relative to each other (purpose; constitution; and Figures); a printed wiring board positioned on the printed wiring board receiving portion, the printed wiring board having both first and second substantially planar surfaces that are substantially parallel to each other and at least one filled hole extending from the first surface to the second surface (purpose; constitution; and Figures); a filling mechanism wherein the scavenging blade is not part of the filling mechanism (purpose; constitution; and Figures). The solder wave is the filling mechanism. Oikawa et al. also teaches the scavenging blade is coupled to the filling mechanism (Figure 1).

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshikawa et al. (6,193,144 B1) as applied to claim 1 above, and further in view of Erdmann (6,491,204 B1). Yoshikawa et al. teaches all of the limitations of the claims except the system is adapted to remove fill material which accumulates on the blade during the relative movement of the scavenging blade and printed wiring board.

Erdmann teaches the system is adapted to remove fill material which accumulates on the blade during the relative movement of the scavenging blade and printed wiring board stencil. At the time of the invention it would have been obvious to combine the scavenging blade cleaner of Erdmann with the scavenging blade system of Yoshikawa et al. in order to provide a clean blade for each wiping action. Clean blades wipe more effectively than dirty ones.

Allowable Subject Matter

Claims 4 and 9-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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The subject matter of claim 10 is allowable, please correct the objection to claim 10.

The following is an examiner's statement of reasons for allowance: The prior art of record does not teach a scavenging blade system as recited by claim 4, particularly the scavenging blade is positioned adjacent to the first surface, between the first end and the second end of the printed wiring board, and divides the first surface into the first area and the second area, wherein the first area comprises at least one hole containing fill material extending outward from the printed wiring board for the distance substantially greater than the distance separating the scavenging blade from the printed wiring board, and the second area comprises the plurality of holes containing fill material, none of which have fill material extending outward from the printed wiring board for the distance substantially greater than the distance separating the scavenging blade from the printed wiring board; or a scavenging blade system as recited by claim 9, particularly the scavenging blade is polished, flexible, and sharpened along at least one edge such that it has the width less than or equal to approximately 0.003 inches; or a scavenging blade system as recited by claim 10, particularly the crossbar coupled to two bearing blocks with one of the two bearing blocks being slideably coupled to one of the two guide rails, and the other of the two bearing blocks being slideably coupled to the guide rail; and the clamping device clamping the scavenging blade to the crossbar.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art of record that is cited as of interest is presented on the form-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kiley Stoner whose telephone number is (703) 305-0723. The examiner can normally be reached on Monday-Thursday (7:30 a.m. to 6:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on Monday-Friday. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Kiley Stoner A.U. 1725

Kiley Stoner 3-6-03